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INDIAN FISHERIES ABSTRACTS

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BARRACKPORE, WEST BENGAL

INDIAN FISHERIES ABSTRACTS

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INDIAN FISHERIES ABSTRACTS
(Indian Fish. Abstr.)

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ENTRIES

1. Abdulali, Humayun (1985)

   75, Abdul Rehman Street, Bombay-400003.
   On the export of frog legs from India.
   J.Bombay Nat. Hist.Soc., 82(2): 347-375

   This is a revised version of the report submitted to the ICAR in June, 1979 under their 3 year project No. 12-15/73-PP entitled 'Determination of Ecological Disturbances in Agricultural and adjoining lands by the removal of Rana tigrina and Rana hexadactyla for export. With the help of 15 tables author has shown the restricted breeding season of the frog, its growth, its readiness to breed in the year after hatching and its food at different ages and seasons etc.

   ... 7 ref.

2. Akolkar, A.B. & S.D.Belsare (1983-84)

   School of Biological Sciences, Bhopal University, Bhopal-462 026, M.P.
   Carp culture in primary oxidation pond.
   Matsya, No. 9&10: 93-95.

   Attempts were made to culture common carp, Cyprinus carpio in sewage oxidation pond at Bhopal. Fish cultured in such ponds showed remarkable growth and better yield (11,938 kg/ha) with excellent nutritive value.

   ... 19 ref.

3. Anon, (1985)

   New method for preserving fish.
   P.T.I. Science Service, 4(22): p.1

   A cheap chilled sea water preservation method developed by the Mangalore based Fisheries College has been discussed. The pelagic fishes were found to retain their freshness better in chilled sea water than those preserved with only ice or left without ice. This is popular among small fishermen.

4. Anon, (1985)

Recycling of human waste for fish production. Fishing Chimes, 5(7): 30p.

The reasearch work at the Division of Agriculture and Food Engineering of Asian Institute of Technology, Thailand, involved the recycling 7 human waste into microalgae and duckweed for fish feed, integration of crops, livestock and fish, utilisation of water hyacinth as fish feed etc.

5. Anthonym A.D. (1983-84)

Department of Zoology, University of Jos, Nigeria.
Food and feeding habits of Garra mullya (Sykes) and Garra mcClellandi (Jendon).
Matsya No. 9&10: 151-156.

From the stomach analysis of two hillstream fishes, Garra mullya and Garra mcClellandi it was observed that there is no competition for food between these two species. The only food item common to these two species was Navicula.

... 12 ref.

6. Apte, Shree Kumar & Joseph Thomas (1985)

Biology and Agriculture Division, Bhabha Atomic Research Centre, Trombay, Bombay-400085.
Effect of sodium on membrane potential, uptake of phosphate, nucleoside phosphate pool and synthesis and expression of nitrogenase in Anabaena torulosa.
Indian J. Exp. Biol., 23(9) : 518-522.

It is ascertained that the influence of Na^+ on the rate of protein synthesis, membrane potential, uptake of phosphate and nucleoside phosphate levels in a heterocystous cyanobacterium Anabaena torulosa is in conjunction with its effect on the synthesis and activity of nitrogenase.

... 30 ref.

7. Arunachalam, S.; S. Palanichamy and M.P. Balasubramanian (1985)

Post-graduate and Research Dept. of Zoology, A.P.A. College of Arts & Culture, Palani-624602 (India).

Sublethal effects of carbaryl on food utilization and oxygen consumption in the air-breathing fish, Channa punctatus (Bloch).

J. Environ. Biol, 6(4): 279-286.

Food consumption drastically decreased when fishes were reared in 5ppm carbaryl medium (sublethal). Oxygen consumption also decreased with the increasing concentration of carbaryl.

... 16 ref.

8. [1]Balasundaram, C. &[2]A.K. Kumaraguru (1985)

1. School of Biological Sciences, Environment and Natural Resources, Madurai Kamaraj University, Madurai-625021.

2. School of Energy, Environment and Natural Resources, Madurai Kamaraj.

Studies on mating, spawning and development of egg in Macrobrachium nobilii (Henderson and Mathai).

Proc. Indian Acad. Sci (Anim), 94(4): 421-426.

The chronomorphological events during the development of the egg of the freshwater caridean prawn, Macrobrachium nobilii, were followed from spawning to hatching. The rate of egg development is reported to increase by 2.5 times for a temperature rise of 10°C.

... 15 ref.

9. Bano, Yagana (1985)

Dept. of Zoology, Aligarh Muslim University, Aligarh-202 001.

Sub-lethal stress of DDT on biochemical composition of cat-fish Clarias batrachus

Indian J. Environ. Helth, 27(3): 230-236.

Clarias batrachus was exposed for 12, 48, 120 hrs to DDT at concentrations of 0.001, 0.002 and 0.005 and 0.01 g/g body weight. Significant depression in the level of total phosphorus, inorganic phosphorus, acid soluble phosphorus, phospholipid, calcium and fat was observed at initial dose of DDT. The probable effects of sublethal exposure of DDT on several essential cellular and biochemical processes in the fish has been discussed.

... 20 ref.

10. [1]Baragi, M. &[2]P.S.B.R. James (1983-84)

1. University of Agricultural Sciences, College of Fisheries, Mangalore-575 002.

2. Indian Council of Agricultural Research, New Delhi-110 001.

Fishery and bionomics of sciaenids of south Kanara coast.
Matsya, No.9 &10 : 8-16.

Fourteen species of sciaenids contribute to the fishery along the south Kanara Coast, of which Johnius aneus, Otolithus ruber and O. cuvieri are abundant. Bionomics of some important species are also made.

... 12ref.

11. Barrackpore Central Inland Fisheries Research Institute (1985)

Aquaculture Technologies (Aquaculture Extension Manual, Series No. 10, December 1985) 74 p.

The manual deals with the carp culture technology, integrated fish farming, paddy-cum-fish farming, Pen culture, coldwater fish culture, freshwater prawn hatchery, frog seed production technology, technology for reservoir fisheries, beel fishery, carp seed raising and technology for brackishwater shrimp culture.

12. Basu, Subrata & D. Imam Khasim (1985)

Research Centre of CIF Technology, Kakinada-533002.
Studies on the effect of leaching on the quality of ice-stored fish.
Fish. Technol., 22(2): 105-108.

A comparative study on ice storage of milk fish (Chanos chanos) in direct contact and out of contact with ice was taken up. It is reported that the leaching effect was more significant on total volatile nitrogen and non-protein nitrogen than that of amino nitrogen components. It is concluded that fish out of contact with ice will have longer shelf life and more acceptability than the fish preserved in contact with ice.

... 19 ref.

13. Bhaskar, M., P. Sobha Rani, M.V. Chalapathy Rao, P. Reddanna & S. Govindappa (1985)

Dept. of Zoology, S.V. University, Tirupati-57502, India.
Hepatic tissue lipid profiles in fresh-water fish Oreochromis mossambicus (Trevavas) acclimated to acidic & alkaline media.
Geobios, 12(5): 200-203.

The hepatic tissue of Oreochromis mossambicus showed compensatory changes with inductions of lipogenesis in alkaline medium and lipolysis in acidic medium on acclimation.
... 15 ref.

14. [1]Bhatia, H.S. & [2]P.K. Jain (1985)

1. Dept. of Engineering, Delhi College of Engineering.

2. Dept. of Civil Engineering, Indian Institute of Technology, Hauzkhas, New Delhi.

Multiphastic growth kinetics of Eichhornia crassipes in the heterogenous aqueous system.
Indian J. Environ. Hlth., 27(3): 216-223.

An attempt has been made to gain some insight into the growth kinetics so that necessary prediction of the growth rate, growth amount and frequency of harvesting that would be required to remove these nutrients from a heterogenous aqueous system at the given temperature is made possible.
... 13 ref.

15. Bhatt, Shanker D. (1983-84)

Dept. of Zoology, Kumaun University Compus, Almora-263 601.
Light microscopic changes in the islets of langerhans in Clarias batrachus under certain experimental conditions.
Matsya, 9-10 : 1-7.

The response of the cellular components of the catfish islets to the various ecophysiological factors observed in the present study entails a condition akin to mammals. Dietry deprivation induced degranulation of the β-cells and a marked hypertrophy of the α - cells.
... 26 ref.

16. Bisht, R.S. & S.M. Das (1981)

D.S.T. Lakes Project, Kumaon University, Nainital-263 002.
Observations on aquatic insects as food of fishes and the predatory action of some aquatic insects on fish and fish food.
J. Inland Fish Soc. India, 13(2): 80-86.

The results of investigations on the qualitative and quantitative estimation of food of some omnivore and carnivore fishes of Kumaon lakes have been incorporated. It is also reported that Cybister in particular have the most destructive propensity for fish juveniles.

... 21 ref.

17. Chakrabarty, N.M., A.K. Roy & D.D. Halder (1981)

CICFRI, Barrackpore, West Bengal.
Studies on the effect of supplementary feed and fertilizer alone on the growth and survival of Hiza parsia fry.

Results of a statistically designed experiment conducted to study the effect of fertilization and supplementary feeding on the growth and survival of Liza parsia fry are reported. Growth rate observed under different treatment conditions are discussed in relation to physicochemical and biological parameters.

... 20 ref.

18. Chhapgar, B.F. (1983-84)

Taraporevala Aquarium, Netaji Subhash Road, Bombay-400 002.
On a piebald marine catfish.
Matsya, No. 9&10: 175-178 .

On 8.11.1978 a catfish, Arius thalassinus was caught alive and brought to Taraporevala Aquarium, Bombay. This fish was different and instead of having a dark bluish grey on the dorsal region gradually becoming lighter ventrally until it blended into a white belly, the specimen had a uniformly ivory white colour body with black eyes. The detailed measurements of the fish is reported.

... 11 ref.

19. Choudhary, P.S. & S.N. Dwivedi (1983-84)

Central Institute of Fisheries Education, Versova, Bombay-400 061.
Meristic and morphometric studies of Lactarius lactarius (Schneider), of Bombay Coast.
Matsya, No. 9210: 33-37.

In Lactarius lactarius off Bombay Coast the meristic features D VII, D2 I/22, A III/27, Vert 23, Gill rakers 12 on lower and 8 on upper limb are found more common. Preanal region and the depth of body grows faster than head.

... 8 ref.

20. Coad, Brian W. (1983-84)

Icthyology Section, National Museum of Natural Sciences, Ottawa, Ontario, Canada K 1A OM8.
Alburnus doria De Filippi 1864 a Synonym of Leuciscus lepidus (Heckel, 1843) (Oste (Osteichthyes : Cyprin idae).
Matsya, No. 9210: 173-175.

Alburnus doriae was described by De Filippi (1864) from Shiraz in Donthern Iran. It is reported that in all respects A. doriae agrees with Leuciscus lepidus (Heckel, 1843), a species known from the Tigris River basin in Iran and the Qom and Esfahan endorheic drainage basins on the rout between Tehran and Shiraz.

... 7 ref.

21. Das, P. & M. Sinha (1985)

Packages of practices for increasing carp seed production.
Aquaculture Extension Manual, New Series No. 1, CIFRI, Barrackpore, 22p.

The detailed account of the packages of practices relating to induced breeding, hatching, nursery and rearing pond management developed at CIFRI are presented in this bulletin in a manner that would serve as guideline for fishery extension workers.

22. Dehadrai, P.V., M. Yusuf Kamal, R.K. Das (1985)

Packages of practices for increasing production of air-breathing fishes.
Aquaculture Extension Manual, New Series No.3, CIFRI, Barrackpore, 14p.

Practices for increasing production of air breathing fishes related to cultivable species, cultural practices, nursery management, stocking, feed and feeding schedule, culture duration and production, cage culture, disease and constraints have been dealt with. The bulletin serve which as guideline for extension workers, entrepreneurs and progressive fish farmers.

23. De, Sasadhar (1985)

National Research Institute, P.O. Banksol-722 206, Bankura, West Bengal.
The undulatory movements of fishes.
Sci. Cult., 51(10): 334-346.

Author has discussed certain biophysical aspects regarding the undulatory movements of fishes.

... 9 ref.

24. Devadoss, P. (1983-84)

Centre of Advanced Study in Marine Biology, Annamalai University, Porto Novo-608502.
Further observations on the biology of the sting ray, Dasyatis imbricatus (Schneider) at Porto Novo.
Matsya, No. 9&10: 129-134.

The length weight relationship was studied. They are bottom feeders with crustacean forms 64.8% followed by polychaetes with 33.5% of the feed. The percentage of liver weight to body weight was compared with the length of the animal which also showed a strong indication of lesser weight of liver at the onset of maturity.

... 8 ref.

25. Devadoss, P. (1983-84)

Mangalore Research Centre of CMFR Institute, Bolar, Mangalore-575 001,
On some specimens of abnormal elasmobranchs.
Matsya, No. 9&10: 186-188.

Deformities of the following elasmobranchs fauna from the Porto Novo Coast have been reported.

... 7 ref.

26. Devi, Uma P. & P.N. Srivastava (1983-84)

Radium Biology Laboratory, Department of Zoology, University of Rajasthan, Jaipur-302 004 (India).
and
Jawaharlal Nehru University, New Delhi, India.
Effect of thiourea and TSH on radiophosphorus uptake in the Indian catfish, Heteropneustes fossilis Bloch.
Matsya, No. 9&10: 54-59.

There was an increased P-32 uptake in thiourea treated group as compared to the untreated control. The bovine TSH did not have any noticeable effect on the isotope uptake by the soft tissues of the drug-treated fish, but the accumulation in the bone was reduced by the hormone.
... 15 ref.

27. Datta, N.C. & S. Deb (1961)

Fishery and Ecology Research Unit, Dept. of Zoology, University of Calcutta-700 019.
Anatomy of the olfactory apparatus of two marine Indian teleosts.
J. Inland Fish. Soc. India, 13(2): 67-74.

Anatomy of the olfactory apparatus of Megalaspis cordyla and Scomberomorus guttatus is described. The olfactory rosette is oval in both the fishes. Olfactory bulb is absent in both the cases. Structure of the olfactory apparatus has been correlated with the mode of life of the fishes.

... 22 ref.

28. [1]Dutta, Hiran M. & [2]J.S. Datta Munshi (1985)

1. Dept. of Biological Sciences, Kent State University, Kent, Ohio-44242, U.S.A.

2. Dept. of Zoology, Bhagalpur University, Bhagalpur-812007, India.

Functional morphology of air-breathing fishes : a review.
Proc. Indian Acad. Sci (Anim), 94(4): 359-375.

The review deals with the morphology, histochemical analyses of respiratory membrane and muscles, morphometrics and development of respiratory organs, hematology, oxygen uptake physiological and behavioural aspects of air-breathing fishes etc.

... 111 ref.

29. Ghosh, Apurba ; G.N. Chattopadhyay & P.K. Chakraborty (1985)

Packages of practices for increased production in rice-cum-fish cultivation in coastal paddy fields.
Aquaculture Extension Manual, New Series, No. 6, 16p.

Paddy cum brackishwater fish culture system has been dealt with. The manual deals with the plot selection, plot design, management of paddy fields for aquaculture, plot preparation, summer fish crop, kharif cultivation of paddy along with fishes, yield and production rates and the economics.

30. Ghosh, Apurba; M.L. Bhowmick; G.M. Chattopadhyay & R.K. Chakraborty (1985).

Package of practice for increasing production in brackishwater fish and shrimp culture.
Aquaculture Extension Manual, New Series No. 7, 26 p.

The manual deals with the selection of site for brackishwater fish and shrimp farming, pond construction, pond management, seed procurement, culture management, supplementary feed and feed schedule, management of the stock pond, fish disease, harvesting and economics.

31. Ghosh, Apurba; S.K. Saha; A.K. Roy & P.K. Chakraborty (1985).

Package of practices for using domestic sewage in carp production.
Aquaculture Extension Manual, New Series No. 8, 19p.

The manual deals with the characteristics of sewage, selection of site and costruction of sewage-fed farm, treatment of sewage, fertilization schedule, stocking ecological considerations, algae control, control of aquatic insects, fish disease, harvesting pattern, yield rates, economics and constraints.

32. Ghosh, Apurba; S.K. Saha; R.K. Banerjee, A.B. Mukherjee & A.R. Naskar (1985)

Package of practices for increased production in rice cum fish farming system.
Aquaculture Extension Manual, New Series No. 4, CIFRI, Barrackpore, 14p.

The manual gives various designs of paddy plots for integrated production system as well as a set of package of practices to achieve optimum production rate from this system. The manual is a useful guide to agriculturists, fish farmers, entrepreneurs and extension workers.

33. [1]Godagkar, Sudhindra R. & [2]N. Sundararaj (1985)

1. Statistics Unit, College of Fisheries, U.S.A., Mangalore-575002.

2. Dept. of Statistics, College of Basic Sciences and Humanities, University of Agrecultural Sciences, Bangalore-560 065.

Temporal behaviour of marine landing in Karnataka. ii-Seasonal patterns. Fish. Technol., 22(2): 92-98.

Seasonal patterns of 21 fisheries in Karnataka are presented. The fisheries that contribute to the bulk of Karnataka's marine catch are mackerel and oil sardine, and to a lesser extent, penaid prawns.

.. ref.

34. [1]Gopal Dutta N.H. & [2]Sake Inaue (1983-84)

1. Dept. of Zoology University of Mysore, India.

2. Institute of Endocrinology Gunma University, Machashi, Japan.

Nucleolar extrusion in oocytes of the loach Misgurnus anguillicaudatus (Pisces : Cobitidae). Matsya, No.9 &10: 205-208.

An electron microscopic study has been undertaken to demonstrate the sequence of the passage of nucleolar material across the nuclear membrane in the previtellogenic oocytes of Misgurnus anguillicaudatus.

... 7 ref.

35. Guha Sagarika & P.K. Talwar (1981)

Zoological Survey of India,
Calcutta-700 016.
Generic status and type selection for the Indian grassfish, Ambassis thomassi Day (Pisces : Ambassidae), with remarks on its natural distribution.
J. Inland Fish. Soc. India, 13(2): 50-56.

Ambassis thomassi Day, is transferred to the genus Parambassis. Several misconceptions concerning meristic counts in this species are corrected. The species reported to occur only in the freshwater streams/lakes of the south-west coast of India.

... 18 ref.

36. [1]Gupta, D.C. & [2]U.C. Tiwari (1985)

1. U.P. Pollution Control Board, Ghaziabad.

2. Chemical Laboratory, D.A.V. College, Kanpur, India.

Aluminium oxide as adsorbent for removal of hexavalent chromium from aqueous waste.
Indian J. Environ. Hlth., 27(3): 205-215.

The study has been undertaken to examine the adsorption characteristics of alumina with Cr(VI) species. Adsorption characteristics have suggested a heterogeneous nature of the surface sites with respect to the energy of adsorption.

... 26 ref.

37. [1]Gupta, Ranu & [2]C.T. Samuel (1985)

1. National Instt. of Oceanography Regional Centre, Cochin-682 018.

2. Dept. of Industrial Fisheries, Univ. of Cochin, Cochin-682 016.

Aspergillus flavus infection on preserved sec. (Thysiodea macrurus).
Fish. Technol, 22(2): 143p.

Eels not properly washed off its sline and not submerged completely in the formalin solution appears to be succeptible to vigorously growing strain of Aspergillus flavus.

... 2ref.

38. Gupta, Ranu & C.T. Samuel (1985)

Dept. of Industrial Fisheries, University of Cochin, Cochin-682 016.
Some fungal infestations of dried fishes in Cochin markets.
Fish. Technol., 22(2): 132-134.

A survey of the dried fish from the Cochin markets had revealed that they do carry fungal infestations and their chances of mycotoxin production cannot be ruled out.

... 6 ref.

39. [1]Gupta, S.I.; [2]A.K. Kashyap & [1]A.P. Singh (1985)

1. Dept. of Soil Science & Agri. Chemistry, Banaras Hindu University, Varanasi-221 005.

2. Dept. of Botany, Banaras Hindu University, Varanasi-221 005.

Responses of blue-green algae to copper : a comparative study.
Indian J. Environ. Hlth., 27(3): 224-229.

The toxic effect of copper sulphate on various forms of cyanobacteria ranging from unicellular, filamentous non-heterocystous to filamentous heterocystous were investigated.

... 11 ref.

40. Gupta, S.S. & Subrata Basu (1985)

Research Centre of CIF Technology, Kakinada-533 002.
Pickle from blood clam (Anadara granosa) meat.
Fish. Technol., 22(2): 109-111.

A pickle was prepared from blood clam (*Anadara granosa*) meat. The pickle has a shelf-life of more than 5½ months at ambient temperature.

... 10 ref.

41. Jana, B.B. & G.N. Patel (1985)

Dept. of Zoology, University of Kalyani-741 235, India.
Distribution pattern of sulphate reducing and thiosulphate oxidizing bacterial populations in fish ponds of differing farming managements.
Hydrobiologia, *127*(2): 171-186.

Authors observed that the density to sulphate reducing bacteria and thiosulphate oxidizing bacteria was maximal in polyculture and minimal in traditional systems of fish farming.

... 15 ref.

42. [1]Jayabalan, N. & K.[2]Ramamoorthi (1985)

1. Dept. of Fishery Biology, College of Fisheries, Mangalore-575002, India.

2. Centre of Advanced Study in Marine Biology, Parangipetfai - 608502.

Sexual dimorphism in the ponyfish *Leiognathus bindus* (Val.).
Curr. Sci., *54*(22): 1191-1192.

The present note records the first known sexual dimorphic character in *Leiognathus bindus*.

... 1 ref.

43. Jha, B.C.; D.K. Kaushal & Y. Rama Rao (1981)

CICFRI, West Bengal, India.
Observations on qualitative abundance of plankton and periphyton in Govind sagar reservoir.
J. Inland Fish. Soc. India, *13*(2), 126-129.

A total number of 183 genera (153 phytoplankters and 30 zooplankters) have been recorded from Gobindsagar reservoir. The algal flora composed of Chlorophyceae (72 genera), Bacillariophyceae (36 genera), Myxophyceae (18 genera), Dinophyceae (8 genera), Rhodophyceae (4 genera), Euglenophyceae (4 genera) and Xanthophyceae (1 genera).

... 4 ref.

44. Jhingran, A.G.; K.P. Srivastava; R.K. Dwivedi & R.A. Gupta (1981)

CICFRI, Barrackpore, India.
A comparative evaluation of tagging and fin-clipping experiments on major carp population of Gulariya Reservoir.
J. Inland Fish. Soc. India, 13(2): 40-44.

The comparative effects of three marking procedure, namely fin-clipping and tagging by streamer tags and internalancher dart tags have been evaluated for the carp population of Gulariya reservoir. It is concluded that the internal anchor dart tags are more useful for population studies than the streamer tags and fin-clipping.

... 18 ref.

45. [1]Khan, A.A.; [2]G.Narayanappa & [2]R.M. Naidu (1985)

1. Kakinada Research Centre of CIFT, Kakinada-533 002.

2. Burala Research Centre of CIFT, Burala-768 017.

Effect of hanging coefficient on the efficiency of frame net.
Fish. Technol., 22(2): 115-116.

Comparative fishing experiments with frame nets of 0.4 and 0.5 hanging coefficients were conducted. Results indicate that net with hanging coefficient of 0.4 as more effective for better catch.

... 5 ref.

46. Khanna, S.S. ; V.M.S. Sriwastwa; D... Srivastava and K. Kumar (1983-84).

Dept. of Zoology, K.N. Govt. Gyanpur-221 304.
Morphology of pineal organ of Mystus vittatus (Bloch).
Matsya, No.9 &10 : 192-194.

The morphology of the pineal organ in Mystus vittatus has been described, which is T-shaped consisting of horizontally placed oblong pineal sac, club shaped pineal thalamus and long thin pineal stalk.

... 15 ref.

47. Khatri, T.C. (1985)

Zoological Survey of India, Karaikhamuri Cross Road, Cochin-682011.
A method for pesciculture in Idukki reservoir.
Fish. Technol., 22(2): 144-145.

The study shows that Idukki reservoir is in a trophic depression stage and pisciculture is possible only by resorting to 'pocket culture'.

... 1 ref.

48. Krishna, Bal (1985)

Glimpses of Indian technology: fisheries.
PTI Science Service, 4(21): 9-10.

Work in fisheries in India has been focussed on the methods for their conservation, management, development and major achievements in the area including fish breeding technique, 'Pituitary Bank', technology for culturing prawns, mussels, eels and natural pearls.

49. [1]Krishnakumar, S.; [1]G.G. Hiremath; [2]N.R. Menon & [1]H.P.C. Shetty (1985)

1. University of Agricultural Sciences, College of Fisheries, Mangalore-575 002.

2. School of Marine Sciences, University of Cochin, Cochin-682 016.

Preservation of Sardinella longiceps in iced and chilled seawater. Part I - Changes during storage with particular reference to bacterial load and nitrogenous compounds.
Fish. Technol., 22(2): 126-131.

The fish chilled and stored in chilled sea water (CSW) recorded the least, and the fish subjected to delayed icing, the highest values for all the indices of spoilage namely, free aminonitrogen, trimethylamine and total volatile base nitrogen. The CSW held fishes were found to be distinctly superior to the iced ones for the first five days of storage.
... 15 ref.

50. Krishnan, Nirupa & S. Ravichandra Reddy (1983-84)

Dept. of Zoology, Bangalore University, Jnana Bharathi, Bangalore-560 056.
Experimental studies on the utilization of natural food by juvenile Channa gachua (Pisces : Channidae).
Matsya, No. 9&10: 96-99.

Juveniles of Channa gachua were reared in confined waters at 22°c on Tubifex tubifex worms for 30 days and their food intake, growth and conversion efficiency have been studied. A high conversion ratio of 2.8:1 has been reported.
... 14 ref.

51. [1]Kumar, D.; [2]M. Jha & [2]H.D. Kumar (1985)

1. Laboratory of Algal Biology, Centre of Advanced study in Botany, Banaras Hindu University, Varanasi-221 005.

2. The University of Texas at Austin, Marine Science Institute, Port Aransas, TX-78373, U.S.A.

Heavy-metal toxicity in the cyanobacterium Nostoc linckia.
Aquatic Botany, 22(2): 101-105.

The effects of $Hgcl_2$, $Nicl_2$ & $Cocl_2$ on Nostoc linckia were studied. low level (0.2 ppm) of mercury increased heterocyst frequency, stimulated nitrate reductase and ammonium uptake, but significantly inhibited acetylene-reducing and glutamine - synthetase activities.

... 9 ref.

52. Kumari, Girija S.; B. Ratnamala and B.V. Seshagiri Rao (1983-84)

Dept. of Zoology, D.N.R. College, Bhimavaram-534 202.
A new record of the threadfin, Polynemus sheridani Macleay from India.
Matsya, No. 9&10: 196-198.

During the course of investigations on Polynemidae authors have come across Polynemus sheridani Macleay, 1884 which is being recorded for the first time from the Bay of Bengal, India.

53. Kumar, K. Prem; P.A. John & N.K. Balasubramanian (1985)

Dept. of Aquatic Biology and Fisheries, University of Kerala, Trivandrum-695 007.
Fecundity of the allochthonous feeder, Rasbora daniconius (Ham.) and of the autochthonous feeder, Puntius amphibius (Val.)
Proc. Indian Acad. Sci (Anim. Sci), 94(5): 481-488.

The fecundity of Rasbora daniconius and Puntius amphibius was assessed and seen to be higher in the latter. The fecundity was correlated with the length & weight of fish, length and weight of ovary.

... 23 ref.

54. Kurup, B. Madhusoodana & C.T. Samuel (1981)

Dept. of Industrial Fisheries, University of Cochin, Cochin-682 016.
On the occurrence of Ilisha sirishai Seshagiri Rao (Pisces : Clupeidae) in Vembanad Lake, Kerala.
J. Inland Fish Soc. India, 13(2): 100-107.

The occurrence of Ilisha sirishai from the Vembanad Lake is reported for the first time and is a new distributional record from the west coast of India. A brief description of the ecology, occurrence and abundance of Ilisha sirishai in the lake is also given.

... 11 ref.

55. Lipton, A.P. (1983-84)

School of Biological Sciences, Madurai Kamaraj University, Madurai-21.
Fish fauna of Tripura.
Matsya, No. 9210: 110-118.

The ichthyofauna collected from the sub Himalayan region of Tripura from 1976 to 1981 revealed the presence of 93 species of fish belonging to 26 families and 11 orders. Common names of many fishes and location of collection with notes on new occurrences are given.

... 10 ref.

56. Lipton, A.P. & M. Lakshmanan (1985)

Dept. of Microbiology, School of Biological Sciences, Madurai Kamaraj University, Madurai-625 021, India.
Ichthyopthirius multifiliis Fouquet (Protozoa: Ciliata) infection in Channa striatus (Bloch): experimental induction with notes on treatment.
Curr. Sci., 54(21): 1123-1126.

Control of Ichthyopthirius, causing 'ich' or 'white spot' disease, was attempted by using various concentrations of acridine orange (M.S., S.D.'s make). Exposure to 20 ppm of acridine orange for four days was found to be effective in controlling Ichthyopthirius infections.

... 7 ref.

57. Malhotra, Sandeep K. (1985)

Parasitology Laboratory, Dept. of Zoology, University of Allahabad, Allahabad-211 002.
Bionomics of hill-stream cyprinids. I food, parasites and length-weight relationship of Labeo dyocheilus (McClell).
Proc.Indian Acad.Sci.(Anim.),94(4);377-381.

Food habits, parasites and length-weight relationship of the hill-stream fish Labeo dyocheilus are discussed. The frequency distribution of the cestode, Bothriocephalus teleostei is reported to be log-normal.

... 13 ref.

58. Mehta, Ranjana (1983-84)

Senior Research Fellow, High Altitude Zoology Field Station Zoological Survey of India, Solan.
Studies on the weberian apparatus of Cyprinoid fishes and its value in systematics.
Matsya, No. 9&10: 135-143.

A detailed description of the weberian apparatus of Cyprinoid fishes belonging to sub-families Cyprininae, Rasborinae, Garrinae and Abramidinae represented by one genera each has been studied and considered as taxonomically important.

... 22 ref.

59. Mercy, T.V.A.; N.K. Pillai & N.K. Balasubramanian (1983-84)

Dept. of Aquatic Biology and Fisheries,
The Aquarium, Trivandrum-695007.

Studies on the oxygen consumption of the blind catfish Horaglanis krishnai Menon.

Matsya, No.9 (10: 119-124.

Horaglanis krishnai Menon is a blind catfish inhabiting the dug-out wells at Kottayam, Kerala, South India. It was found that the amount of oxygen consumed by the fish in light is higher than that in darkness.

... 7 ref.

60. [1]Mhalathkar, H.N.; [2]T. Joseph Mathai; [1]T.P. George & [2]M. Syed Abbas (1985)

1. CIF Technology, Cochin-682 029.

2. Goa Research Centre of CIF Technology, Goa-403 001.

A demersal trawling gear for inshore waters along the west coast.

Fish. Technol., 22(2): 99-101.

Authors have reported the efficiency tests of three tested designs of 15 m bulged-belly, 15.8 m six seam and 29.26 m longwing type trawls in combination with 114 x 57 cm both rectangular flat and horizontal curved wooden otter boards. The bulged-belly trawl with flat rectangular otter boards has performed better in landing prawns.

... 5 ref.

61. Misra, B.B.; D.R. Nanda & B.N. Misra (1985)

Laboratory of Environmental Toxicology,
Dept. of Botany, Berhampur University,
Berhampur-760 007.

Reclamation with blue-green algae: mercury uptake by algae cultured in solid waste of achlor-alkali factory and its effect on growth and pigmentation.

J. Environ. Biol., 6(4): 223-231.

Algae has been reported to accumulate appreciable amount of mercury from the waste soil. A significant correlation was obtained between mercury uptake by algae and concentration of the waste.

... 16 ref.

62. Mitra, P.M. & D.K. De (1981)

CICFRI, Barrackpore.
A regremion model for estimating fecundity of Hilsa ilisha (Hamilton) of the Hooghly estuary.
J. Inland Fish. Soc. India, 13(2): 1981: 1-5.

Gonad weight and total length of Hilsa ilisha of the Hooghly estuary have been found to be jointly the best estimators of fecundity from amongst other variables (total weight, gonad width, gonad length).

... 3 ref.

63. Mukherjee, Subhra & M. N. Naor (1985).

Dept. of Botany, Ranchi University, Ranchi, Bihar, India.
Chara biharensis nom. nov., a new name for Chara indica Mukherjee & Noor.
Hydrobiologia, 120(2): p.189.

The authors have proposed a new epithet for these algae from India : Chara biharensis nom. nov., in place of Chara indica. The name Chara biharensis is thus synonym of C. indica.

... 4 ref.

64. Murthy, B. Narasimha; M. Srinivasulu Reddy & K.V. Ramana Rao (1985).

Dept. of Zoology, S.V.U.P.G. Centre, Kavali-524 202, India.
Significance of aminotransferase activity of the freshwater teleost, Oreochromis mossambicus (Trewavas) under Lindane toxicity.
Curr. Sci., 54(20): 1077-1079.

Results indicate that under lindane exposure the activity profiles of aspartate aminotransferase (AAT) and alanine aminotransferase (ALAT) followed the same trend as that of the control tissues but with a difference in the activities. The high levels of ALAT & AAT, nmore so of ALAT, under lindane exposure suggest that the fish shows adaptability to lindane toxicity.

... 11 ref.

65. [1]Nagabhushanam, R. & [2]U.M. Farroqui (1985)

1. Dept. of Zoology, Marathwada University, Aurangabad.
2. Dept. of Zoology, Ahmednagar, College, Ahmednagar.

Histophysiology of the ovary in relation to endocrinological manipulations in the marine crab, Scylla serrata.
Proc. nat. Acad. Sci. India, 55(B),I:6-12)

The process of oogenesis and endocrine control of oogenesis in the crab, Scylla serrata are described. The physiological significance of different dates are described in the light of reprobio-endocrinology of the crab.

... 24 ref.

66. Naidoo, G. (1985)

Dept. of Botany, University of Durbon Wastville, Durbon (South Africa).
Effects of waterlogging and salinity on plant-water relations and on the accumulation of solutes in three mangrove species.
Aquatic Botany, 22(2): 133-143.

Dispersal units of Avicennia marina, Rhizophora gymnorrhiza were cultivated in mangrove sediment under greenhouse conditions. The adaptive features of each species determine its characteristic habitat in intertidal areas.

... 25 ref.

67. Naluchinnappan, I & J.E. Prabhakar Raj (1983-84)

Freshwater Biological Station, State Fisheries, Bhavanisagar-638451.
Rearing of carp spawn in cage.
Matsya, No.9 &10: 200-202.

The results of rearing the carp spawns to fry in the Velon screen cages, kept in the marginal area of the Poongar swamp (Bhavanisagar) are reported.

... 4 ref.

68. Natarajan, P., R. Santhanam & V. K. Venkataramani (1985)

Fisheries College, Tamilnadu Agricultural University, Tuticorin-628008.
Freshwater prawn-cum-carp farming a new polyculture practice.
Fishing Chimes, 5(7): 52-54.

It is recommended that the culture of surface and column feeding carps and bottom feeding freshwater prawns could be undertaken as a polyculture practice to maximise the yield. Stocking of prawn and fish seeds, supplementary feeding and production are discussed.

69. Nautiyal, Prakash & M.S. Lal (1985)

Dept. of Zoology, Garhwal University, Srinagar, Garhal.
Fecundity of the Garhwal Himalayan mahseer Tor putitora (Ham).
J. Bombay Nat. Hist. Soc., 82(2): 253-257.

Authors have described the fecundity of the Tor putitora procured from the river Nayar. The fecundity ranged from 26,997.71 to 98,583.5 in total length range of 870.0 to 1377 mm.

... 41 ref.

70. Negi, K.S.; J.K. Tiwari & R.D. Gaur (1985)

Dept. of Botany, Garhwal University, Srinagar-246 174, U.P.

A contribution to the flora of Dodital - A high altitude lake in the Garhwal Himalaya (Uttarkashi), U.P.
J. Bombay Nat. Hist Soc., 82(2): 258-270

Authors have given an account of Angiosperms collected from a high altitude lake (Dodital). The paper enumerates a list of 275 species and 150 genera, represented by 60 families.

... 13 ref.

71. Pal, R.N. & A.K. Ghosh (1986)

Package of practices for identification and control of commonly occurring diseases in freshwater aquaculture.
Aquaculture Extension Manual, New Series No. 9, CICFRI, Barrackpore, 23p.

The manual deals with the behavioural indicators of diseased fish or fish-stock, parasite-host-environment relationships, classification of diseases, different diseases and their remedial measures.

...

72. Pandey, K. & Vijai Sen (1983-84)

Dept. of Zoology, University of Gorakhpur, Gorakhpur (U.P.), India.
Studies on the annual fish catch of Bakhira lake (Basti).
Matsya, No.9 &10: 46-53.

The important fish species of Bakhira lake (Basti) comprise 180.42 kg per per annum in the ratio of Murrels - 54.92 kg/ha/yr, Carps - 54.36 kg/ha/yr, feather backs - 12.89 kg/ha/yr, Perches - 2.00 kg/ha/yr and other fishes 9.10 kg/ha/yr.

... 4 ref.

73. Pandey, K.C. & A.K. Pandey (1983-84)

Institute of Advanced Studies, Meerut University, Meerut, U.P.
Seasonal cycle of blood glucose and non-protein nitrogen (NPN) of Rita rita (Hamilton).
Matsya, no.9 & 10: 185-186.

Low glucose values have been recorded in June while high levels are found in March and August. Lowest non-protein nitrogen values have been recorded in June while highest value in September.

... 13 ref.

74. Pandey, K.C. & R.C. Misra (1983-84)

Dept. of Zoology, Lucknow University, Lucknow- 226 007.
Histochemical studies on olfactory epithelium of Anabas testudineus (Bloch).
Matsya, No. 9&10: 17-24.

Histochemical localization of acid and alkaline phosphatases, lipid, glycogen and mucin have been studied in the olfactory epithelium of fresh water fish, Anabas testudineus. It appeared that two enzymes (acid and alkaline phosphatase) and lipids play some vital role in olfactory mechanism.

... 46 ref.

75. Pandey, P.K.; N.K. Singh; D.K. Choudhary & G.K. Thakur (1981)

Post Graduate, Dept. of Zoology, University of Bhagalpur-812 007.

Effect of organophosphorus insecticide, malathion, on the haematology of Channa punctatus (Bloch).
J. Inland Fish soc. India, 13(2): 120-121.

A significant increase in the plasma haemoglobin level of Channa punctatus exposed to malathion was recorded indicating the impairment of erythrocyte function leading to intravascular haemolysis.

... 8 ref.

76. Pardhasaradhi, A. & J.R.B. Alfred (1983-84)

Dept. of Zoology, School of Life Sciences,
North Eastern Hill University,
Shillong-793 014 (Meghalaya).

A longitudinal and altitudinal distribution of fish in two hill-streams of N.E. India.

Matsya, No.9 &10: 60-69.

The fish populations of Simsong (Someswari) river and Damrang (Krishnai) were investigated. The number of species increased from headwaters to downstream in Damrang and a high number of species were recorded in the midstations at Simsong. The gradient of the streams had no detectable effect on the increase or decrease in species numbers.

... 12 ref.

77. Pandian, T.J. & M. Peter Marian (1985)

School of Biological Sciences, Madurai
Kamaraj University, Madurai-625 021.

Time and energy costs of metamorphosis in the Indian bullfrog Rana tigrina.

Copeia, (3): 653-662.

Rana tigrina tadpoles were reared on different foods and rations at different temperatures and larval densities in waters of different qualities and at different aquarium water depths. Time and energy costs of metamorphosis were estimated. Accumulation of 1,500 J by the terminal tadpole is the minimum required energy for successful metamorphosis.

... 19 ref.

78. Pant, J.C. & T.S. Gill (1983-84)

Dept. of Zoology, Kumaun University, Nainital-263 002.
Influence of salinity on biochemical and haematological indices in a teleost Puntius conchonius.
Matsya, No.9 & 10: 180-183.

Three separate batches of adult Puntius conchonius were exposed to 6140 mg/l Nacl, 368.5 mg/l Kcl and 2791 mg/l $Cacl_2$. The biochemical and haematological responses were recorded at 24 hr. interval upto 96 hrs. The parameters evaluated were blood glucose, amino acid nitrogen, muscle water, total erythrocyte count and haemoglobin.

... 10 ref.

79. Pathani, S.S. & S.M. Das (1983-84)

Dept. of Zoology, Almora Campus Kumaun University, Almora-263 601.
On spawning ecology of Barilius bendelisis (Ham).
Matsya, No. 9&10: 198-200

Survey of spawning sites, spawning ecology and eggs-larvae were made from high altitude oligotrophic lakes of Kumaun (Bhimtal and Naukuchiatal) for last four years(1976-80). Physico-chemical parameters were studied during spawning seasons of the fish in the spawning sites.

... 9 ref.

80. Pati, S. (1981)

Dept. of Zoology Ravenshaw College, Cuttuck - 753 003.
On the seasonal migration of half-beak Hemiramphus (aimardi Val. in the river Mahanadi.
J. Inland Fish Soc. India, 13(2): 113-115.

Author has suggested that since the migrating population encountered at Cuttack were not spawners, the possibility of a spawning migration, towards the upstream is a remote possibility. The migration was also not attributed to feeding. The migration appears to be an overwintering migration in the river Mahanadi and the fishes spend the winter in the deep gorges in the middle reaches of the river.

... 9 ref.

81. Patnaik, S. & K.M. Das (1981)

CICFRI, Barrackpore, West Bengal
The water and protein content of certain aquatic plants from different habitats.
J. Inland Fish Soc. India, 13(2): 103-106.

Water and protein contents of a number of aquatic weeds have been evaluated. It is reported that the aquatic weeds have 7 to 26% of crude protein and a moisture content of 80 to 97%.

... 8 ref.

82. Pradeep, R. & P. Lakshmanaperumalsany (1985)

School of Marine Sciences, University of Cochin, Cochin-682 016.
Antibiotic sensitivity of Vibrio parahaemolytius strains.
Fish. Technol., 22(2): 135-139

The strains of Vibrio parahaemolyticus isolated from water, sediment, plankton, fish and prawn of Cochin backwater were tested for sensitivity to ten antibiotics. Isolates from fish and prawn showed higher resistance to Ampicillin and none of them was sensitive to Kanamycin.

... 16ref.

83. Prabhudeva, K.N. & N.R. Menon (1985)

School of Marine Science, University of Cochin, Cochin-682 016.
Rate of filtration by Perna viridis pre-exposed to heavy metals.
Fish. Technol., 22(2): 102-104.

Perna viridis were exposed to various concentrations of zinc (0.025 to 0.150 ppm) and copper (0.005 to 0.08 ppm) for a period varying from 24 h to 96 h and then the rate of filtration estimated under metal free culture conditions.

... 10 ref.

84. [1]Prasad, C.U., [1]K.V. Raju, (Mrs.) [2]K. Swaminathan, [1]P.G. Rama Rao, [1]D. Seethapathi Rao & [3]Y.S. Murty (1985)

1. NEERI Hyderabad Zonal Laboratory, R.R.I. Campus, Hyderabad-500 007.

2. NEERI, Nehru Marg, Nagpur-440 020

3. A.P. Water Pollution Control Board, Hyderabad.

Qualitative and quantitative assessment of wastewaters from an organo phosphate pesticide manufacturing industry.
Indian J. Environ. Hlth., 27(3): 244-256.

The physico-chemical characteristics of wastewater discharged from Quinalphos, Trimethyl Phosphite, Monocrotophos and Diazinon plants are presented. The wastewater contain in general high concentration of dissolved solids, low suspended solids, high COD & BOD, high sodium and chlorides.

... 12 ref.

85. [1]Prasad, R. &[2]H.R. Singh (1983-84)

1. Asst. Director of Fisheries, Uttarkashi, U.P.
2. Dept. of Zoology, University of Garhwal, Srinagar Garhwal (U.P.)

Lipoid degeneration of the liver and its control in brown trout at Kaldayani hatchery.
Matsya, No. 9& 10: 178-180.

The present communication described an outbreak of lipoid degeneration of the liver and its control in brown trout (Salmo trutta fario). The body cavity of the severely affected fish was found to be filled up with pale-yellow fluid. The liver was yellowish-brown in colour. The disease was due to malnutrition associated with low temperature.

... 5 ref.

86. Pugalendhi, M. & S.S. Gnanamanickam (1985)

Centre of Advanced Studies in Botany, University of Madras, Madras-600 025.
Ecology of Pseudomonas aeruginosa (shroeter) migula in hospital and domestic effluents of Madras city.
Curr. Sci., 54(23): 1238-1239.

In this study an attempt has been made to study the quantitative distribution of the organism in domestic and hospital effluents collected from different locations of Madras city and has been found to be abundant in city environment.

87. Rajyalakshmi, T.; S.M. Pillai & A.K. Roy(1981)

CICFRI, Barrackpore, West Ben al.
Observations on the interaction of areation and stocking density on growth and survival of the portlarvae of Penaeus monodon Fabricus.
J. Inland Fish. Soc. India, 13(2): 87-91.

The effect of aeration and density on the survival and growth of post larvae of Penaeus monodon collected from nature has been studied under laboratory conditions.

... 6 ref.

88. Ramakrishnaiah, M. (1983-84)

Reservoir Fisheries Project of Central Inland Fisheries Research Institute, Nagarjunasagar, Vijayapuri South-522 439.
Some observations on the biology of Pseudeutropius taakree (Day), a schilbeid catfish from Nagarjunasagar reservoir.
Matsya, No. 10: 100-109.

The lengths at different ages as estimated by Petersen's method were 215, 265, 315 and 325 mm respectively during II to V years. A small fraction of the population mature at 2 years but majority after 3 years and breed during June-September. It is a carnivore feeding on insects and teleosts.

... 20 ref.

89. Ramanathan, N.; P. Natarajan & M. Sukumaran (1985)

Fisheries College, Tamil Nadu Agricultural University, Tuticorin -628 008, India.
Studies on the induced spawning and larval rearing of a freshwater catfish, Mystus punctatus (Jerdon).
Proc. Indian. Acad. Sci (Anim), 94(4): 384-398.

Mystus punctatus was successfully bred by injecting pituitary extract of marine catfish Tachysurus maculatus. The relative fecundity was 43.1 and the fertilization success was 85 ± 2.8 %. A description of the egg and larval development to metamorphosis is given.

... 5 ref.

90. Ram, Raj Narayan & A.G. Sathyanesan (1985)

Dept. of Zoology, Banaras Hindu University, Varanasi-221 005, India.
Occurrence of myxosporidian cyst in the pituitary of the teleost Channa punctatus (Bloch).
Curr. Sci., 54(19): p. 1016.

A large myxosporidian parasitic cyst is reported occupying a part of the posterior neurohypophysis, part intermedia and proximal pars distalis. Despite the large myxosporidian cyst, the pituitary cytology was not affected.

... 3 ref.

91. Ram, R.N. & A.G. Sathyanesan (1983-84)

Centre of Experimental Medicine and Surgery Institute of Medical Sciences and Department of Zoology, Banaras Hindu University, Varanasi-211 005.
Effect of mercuric chloride on thyroid function in the teleostean fish Channa punctatus (Bloch).
Matsya, No.9 &10: 194-196.

In the present study 40 C. punctatus kept in 0.01 ppm of mercuric chloride for 180 days. In treated fishes pools of free blood cells were noticed in between the thyroid follicles, suggesting extravasation or rupture of blood sinus. Hypertrophy & hyperplasic of follicls were also apparent.

... 5 ref.

92. Rao, G.V. Krishna; Y. Prabhakara Rao & D.G.V. Prasada Rao (1985)

Dept. of Zoology, Andhra University,
Waltair-530 003, India.
Changes in some biochemical constituents of the fiddler crabs Uca annulipes latreille and U. triangularis (Milne Edwards) in response to eyestalk removal.
Proc. Indian Acad. Sci. (Anim),94(5): 475-480.

Bilateral extirpation of eyestalks resulted in hyp glycemia and a fall and rise in the glycogen content of hepatopancreas and muscle respectively. Eyestalk removal also caused a fall in protein and fat content of hepatopancreas and muscle respectively. Injection of eyestalk/restored the /a extract level of blood sugar, glycogen, protein and fat to normal level.

... 22 ref.

93. Rao, K. Gopal, A.T.S. Janak & A. Seetharama Raju (1985)

Dept. of Fishery Science. A.P.
Agricultural University Kakinada-533 007.
Freshwater fish culture three essential requirements.
Fishing Chimes, 5(6): 42-50.

The most essential three requirements affecting the growth, survival and production of fish have been considered to be oxygen, food and health. Managements of dissolved oxygen in fish tank, food chain in the tanks, food and feeding habits of cultivated fishes and some important diseases of cultivated carps and their control measures have also been discussed.

94. Ryan, Frederick, J. (1985).

USDA-ARS Aquatic Weed Research Laboratory,
Botany Dept., University of California,
Davis, CA95616 (U.S.A.).
Enzymatic isolation of cells from aquatic macrophytes.
Aquatic Botany, 22(2): 173-176.

Cells were isolated by enzymic digestion from a number of aquatic macrophytes and their photosynthetic activities were determined. Eichhornia crassipes, Myriophyllum spicatum and M. brasiliense provided phytosynthetically active cells after digestion with commercial pectinase.

... 5 ref.

95. Santhana Kumar, G. & S.V. Job (1983-84)

G. Venkataswamy Naidu College, Kovilpatti, Tirunelveli Dist., Tamil Nadu, India, Pin-627 702.
School of Biological Sciences, Madurai Kamaraj University, Madurai, Tamil Nadu (India).
Feeding biology of Mystus keletius (Valen).
Matsya, No. 9-10: 25-32.

Mystus keletius from Tambaraparani river has been reported to feed on organic debris. It feeds through out the year including breeding season.

... 20 ref.

96. Sareen, M.L.; K.K. Tandon & K.K. Babbar (1983-84)

Dept. of Zoology, Punjab University, Chandigarh, India.
A note on the length weight relationship of Labeo pangusia (Hamilton).
Matsya : No.9& 10: 191-192.

Length-weight relationship of the mirror carp, Labeo pangusia from the river Ghaggar at Panchkula has been studied. The study indicates that L. pangusia should not be caught from May to July/August due to their spawning season.

... 4 ref.

97. Sarkar, S.K. & A. Pramanik (1985)

Dept. of Zoology, University of Kalyani, Kalyani-741 235. India.
On the dynamics of aquatic ecosystem in relation to fish growth fertilized with muriate of potash.
Geobios, 12(6): 230-234.

The growth of Tilapia mossambica in earthen vessels fertilized with muriate of potash indicated significant inverse relationship with ammonia of water and good correlation with phosphorus of water and soil ($P < 0.05$). Fertilizer did not show any deleterious influence on the bottom fauna.

... 11 ref.

98. Sarkar, S.K.; B.N. Singh & A. Choudhury (1985).

Dept. of Marine Science, Calcutta University, Calcutta-700 019. India.
Composition and variations in the abundance of copepoda in the Hooghly estuary.
Geobios, 12(5): 186-189.

Seasonal variations in the mean abundance of different groups and species of copepods were very much related to salinity fluctuations occurring in the Hooghly estuary, showing higher abundance from March to July.

... 9 ref.

99. Sarkar, S.K.; B.N. Singh & A. Choudhury (1985)

Dept. of Marine Science, Calcutta University, Calcutta-700 019.
Copepod components of inshore zooplankton of the Bay of Bengal off Sagar island, West Bengal, India.
Curr. Sci., 54(23): 1217-1220.

Copepods constitute the most predominant portion of zooplankton biomass in the lower stretch of Hooghly estuary around Sagar Island during March, 1979 to February, 1981. Most of the copepod species showed higher diversity and abundance during high saline premonsoon period.

... 13 ref.

100. Sarma, A.L.N. & P.K. Pattanaik (1985)

Post-graduate Dept. of Life Science, Regional College of Education, Bhubaneswar-751 007.

Ecological studies on zooplankton of freshwater ponds in and around Bhubaneswar. J. Environ. Biol., 6(4): 245-256.

The three water bodies, a pond, a canal and an artificial concrete cistern were considered for the studies on zooplankton. The zooplankton standing stock density and biomass values ranged from 578 to 83.03 nos/100 L and 20.28 to 7204.25 mg/100 L respectively.

... 13 ref.

101. Sarma, G.H.R. & K. Malla Reddy (1983-84)

Reproductive Physiology Wing, P.G. Centre for Biological Sciences, New Science College, Hyderabad-500 029.
Effect of caulophyllum on the cholesterol content of the gonads of a freshwater fish Channa punctata (Bloch).
Matsya, No. 9-10: 87-89.

The cholesterol content of gonads of Channa punctata has been studied after administering a homoeopathic drug caulophyllum. Two potencies, 30x and 1 M are used. Treatment with 30 x, the cholesterol content increased gradually in the ovary as well as in the testis.

... 11 ref.

102. [1]Sarojini, R. & [2]G. Gyananath (1985)

1. Dept. of Zoology, Marathwada Univ., Aurangabad-431 004, India.

2. Dept. of Biosciences, Sri Sathya Sai Institute, Prasanthinilayam-515 134.

Seasonal variations and the role of neurosecretory hormones on the androgenic gland of the prawn Macrobrachium lamarrii. Proc. India Acad. Sci (Anim. 94(5): 503-508.

Androgenic gland of Macrobrachium lamerrii shows signs of increased secretory activity during the sexually active phase of the male. Brain and thoracic ganglion extracts also showed enhanced secretory activity of androgenic gland and corresponding gonadal activity in the male prawns.

... 13 ref,

103. Saxena, R.K. (1981)

CICFRI, Barrackpore, West Bengal, India.
A technique of photographing growth bands on opercular bones for ageing mahseer Tor tor (Hamilton).
J. Inland Fish. soc. India, 13(2):110-112.

For taking the photograph of the opercular bone a twin lens reflex Yashica camera, loaded with 50 A.S.A. film was used. A set of additional +3 (close up) benses were used and was photographed at the aperture of 22f of 'B' setting.

104. [1]Saxena, Ranjana,[2]A.P. Tyagi & [3]J.K. Sahgal (1985).

1. U.P. Pollution Control Board, Pragati Kendra, Kapurthala Complex, Aliganj, Lucknow-226 001.

2. Laboratory of Fisheries Biology, D.A.V. Post-Graduate College, Muzaffarnagar-251 001.

3. Dept. of Zoology, D.S. Post-Graduate College, Aligarh (India).

Undifferenciated neoplastic growth in the lips of Channa striatus.
J. Environ. Biol., 6(4): 305-308.

An abnormal specimen of Channa striatus with neoplastic growth in its lips which has posed a hindrance in feeding and caused death due to starvation.

... 4 ref.

105. Selvaraj, C; A.K. Mohanty & S.R. Ghosh (1981)

CICFRI, Barrackpore, West Bengal.
Preliminary observations on the transport of fish fry under air pressure.
J. Inland Fish. Soc. India, 13(2): 75-79.

A cycle pump was used to pump in atmospheric air, instead of oxygen from the cylinder, into the plastic bags for the transportation of spawn and fry. The metabolic rate is higher in bags provided with oxygen compared to bags with atmospheric air.

... 3 ref.

106. Shah, K.L. & B.C. Tyagi (1985)

Composite Fish Culture Centre, Central Inland Fisheries Research Institute, Govt. Fish Seed Farm, Saidpura (CSSRI) Karnal, India.
A note on the role of Kachuga tectum Gray reptilia : Chelonia) in controlling aquatic weeds.
Hydrobiologia, 122(3): 243-245.

The herbivorous turtle Kachuga tectum consumes on wide variety of aquatic weeds and has potential as a biological agent against obnoxious weed growths.

... 18 ref.

107. Sharma, B.K.; M.K. Das & D.P. Chakraborty (1985)

Package of practices for increasing production in fish-cum-livestock farming system.
Aquaculture Extension Manual, New Series No. 5,, CICFRI, Barrackpore, 32p.

The package of practices for increased production in fish-cum-livestock farming system has been described. The manual deals with the integrated fish cum pig farming, integrated fish cum duck farming and integrated fish cum poultry parming.

...

108. Sharma, K.P. (1981)

Fisheries Dept. Suratgarh, Rajasthan-335804.
Breeding of scale carp Cyprinus carpio communies Linn. during solar eclipse.
J. Inland. Fish Soc. India, 13(2): 122-123.

It could not be ascertained by the author which were the factors responsible for interruption in playing and synchronization among some fishes before, during/after /or the solar eclipse. Some factors, like chemical or physical changes in water qualities before or during the solar eclipse might be responsible in spawning inhibition.

... 3 ref.

109. Sharma, P.C. & M.C. Pant (1981)

Dept. of Zoology, D.S.B. Campus, Kumaun University, Nainital, (U.P.)
Seasonal population variations and life cycle of a Cladoceran simocephalus vetulus (O.F. Muller).
J. Inland Fish. Soc. India, 13(2): 57-66.

The seasonal variations in the size of the populations and the life history of a cladoceran, S. vetulus were studied both in the laboratory as well as in the field. The mean life span is reported to be 65 ± 2 days at 21°C. Two peaks of population occur during October and February.

... 27 ref.

110. Silas, Nwagwu O. & A.D. Antony (1981)

Dept. of Zoology, University of Jos (Nigeria).
The use of Aphyosemion gardneri to control morquito larvae in Northern Nigeria.
J. Inland Fish. Soc. India, 13(2): 116-119.

Authors have found that Aphyosemion gardneri showed a greater preference to mosquito larvae with the resistance of this fish to adverse environmental conditions, its gluttonous habit, and preference to mosquito larvae, small size, renders the fish to be a highly promising tool for biological control of mosquito.

... 7 ref.

111. Singh, Amarjeet & O.N. Srivastava (1985)

Dept. of Botany, Ranchi University, Ranchi-834 008, India.
Effect of light intensity on the growth of Azolla pinnata R. Brown at Ranchi, India.
Hydrobiologia, 126(1): 49-52.

Authors observed that the light intensity has a profound effect on the growth of Azolla pinnata. Fresh weight, dry weight and moisture content were maximum at 80000 lux, but maximum found area was attained in 50% light intensity. The plant is reported to express heliophytic characteristics.

... 18 ref.

112. Singh, Amarjeet & O.N. Srivastava (1985)

Dept. of Botany, Ranchi University, Ranchi-834 008, India.
Effect of photoperiod on the growth of Azolla pinnata R. Brown.
Hydrobiologia, 123(3): 211-214.

Authors have found that photoperiod has a profound effect on the growth of Azolla pinnata. Fresh mass, dry mass and moisture content were found to be maximum in 12 h and minimum in 0 h (dark) photoperiod. The plants were capable of growing under continuous illumination and unnatural photoperiods.

... 3 ref.

113. Singh, Kavindra & Neeru Singh (1985)

Post-Graduate, Dept. of Zoology, Bareilly College, Bareilly-243 001.

Studies on alkaline phophatase activity of the serum of common frog Rana tigrina. Proc. nat. Acad. Sci. India, 55(B),I:13-17.

Some biochemical properties of serum alkaline phosphatase activity of Rana tigrina have been studied and kinetics are determined. Para-chloro-mercuricbenzoic acid, sodium arsenate, ascorbic acid, cysterine, KCN and Ethylen-ediamine Tetra-acetic acid inhibited the enzymic activity to varying degrees.

... 20 ref.

114. [1]Singh, R.K. & [2]J.S. Datta Munshi (1983-84)

1. Dept. of Zoology, Udai Pratap College, Varanasi-221 002, India.

2. P.G. Dept. of Zoology, Bhagalpur University, Bhagalpur-812 007.

On the structure of retina of two fresh-water cyprinoid fishes. Matsya, No. 9&10: 144-150.

The structure of eye-ball and photoreceptors in Catla catla and Puntius sophore has been studied. Catla catla has prominent big eyes with complicated corneal structure, well developed choroid gland and densely pigmented epithelium. Puntius sophore has eyes with poorly developed choroid gland and the pigmentation scarce.

... 23 ref.

115. [1]Singh, R.K.; [1]V. Kolekar & [2]Ravish Chandra (1985)

1. CICFRI, Gauhati-781 003.

2. CICFRI, Ahhahabad-211 002.

Comparative study of certain ecological aspects of river Brahmaputra and Dighali beel in Assam.
Proc. nat. Acad. Sci. India, 55(B) II: 21-30.

Comparative study of river Brahmaputra and Dighali beel showed that the values of dissolved oxygen, carbon dioxide, nitrate nitrogen, phosphate, dissolved organic matter, phyto and zooplankton were high in beel water while in river water the hydrogen ion concentration and alkalinity were more.

... 18 ref.

116. Singit, G.S. (1985)

Tungabhadra Board, Tungabhadra Dam-583 225.
Successful control of water weeds in Tungabhadra power canal complex through grass and common carp.
Fishing Chimes, 5(7): 33-42.

Successful control of submerged aquatic weeds is achieved in the power canal, Hampi forebay and tail race channel of Tungabhadra Board within 8 months of introducing common carp and grass carp. It is suggested that the biological control of submerged aquatic vegetation can be used conveniently and economically.

117. Sing, R.K. (1983-84)

Taraporevala Marine Biological Research Station, Netaji Subhash Marg, Bombay-400 002.
Observations on primary productivity and fish production in a perennial inland freshwater fish pond.
Matsya, No. 9&10: 90-92.

The primary productivity of Undasa Pond (M.P.) was studied in relation with the total fish catch. The average primary productivity for the year 1978 was determined as 2.16 gc/m^2/day which shows that the pond is productive but the catch per hectare amounts to be 7.9 kg which is not appreciable.

... 12 ref.

118. Sing, Sarita (1983-84)

School of Studies in Zoology,
Vikram University, Ujjain-446 010.
Comparative studies of pancreas
in some teleostean fishes.
Matsya, No. 9&10: 125-128.

The pancreas is reported to be of in primitive diffused condition in Rasbora daniconius and Lebistes reticulatus but in Ompok bimaculatus it appears to be in advanced condition.

... 22 ref.

119. Sinhababu, D.P. & N. Mazumdar (1981)

Central Rice Research Inst.,
Cuttack-753 006, India.
Evidence of feeding on brown plant
Hopper, Nilaparvata lugens (stall)
by common carp, Cyprinus carpio
Var. communis L.
J. Inland Fish Soc. India, 13(2):
16-21.

A detailed study on the feeding behaviour of common carp, Cyprinus carpio on brown plant hopper, Nilaparvata lugens a serious pest of rice, under captivity was made.

... 23 ref.

120. Sinha, V.R.I. et al.(1985).

Packages of practices for increasing
production in carp culture ponds.
Aquaculture Extension Manual,
New Series No. 2, CIFRI, Barrackpore
30p.

The detailed description of carp culture, relating to pond requirements, aquatic weed control, eradication of unwanted fishes, pond fertilization, fingerling stocking, feeding, harvesting, desease control and economics have been presented to serve as guide line for fishery extension workes and fish farmers as well.

121. Sivakami, S. (1981)

CICFRI, Barrackpore.
Studies on the induced breeding and larval deve opment of Rasbora daniconius (Hamilton Buchanan).
J. Inland Fish. Soc. India, 13(2): 6-15.

Result of induced breeding and larval rearing of a larvivorous carp minnow, Rasbora daniconius are presented. It is reported that the larvae took about 30 days time to attain adult stage.

122. Somasekhar, T. & R.V. Krishnamoorthy (1985)

Dept. of Zoology, University of Agricultural Sciences GKVK Campus, Bangalore-560 065. India.
Denervation atrophy in gastrocnemius and sartorius muscles of the frog (Rana cyanophlictis Sch) following long term sciatectomy.
Indian J. Exp. Biol., 23(9): 493-496.

Changes in long term denervation-atrophy in frog muscles as characterized by per cent loss in the wet weight and variations in some biochemical profiles like myosin content, myosin ATPase activity and total DNA, content were studied in Rana cyanophlictis following three months sciatectomy. ... 32 ref.

123. Srinivasagam, S. (1981).

CICFRI, Barrackpore, West Bengal.
On the food and feeding habits of fishes of Vellar estuary, South India.
J. Inland Fish. Soc. India, 13(2): 124-125.

In all 563 specimens comprising 15 families represented by 23 species were examined by the author. On the basis of the food preferences, fishes were grouped into four categories namely herbivores, carnivores, omnivores and plankton feeders.

... 9 ref.

124. Srivastava, Arun Kumar (1983-84)

Dept. of Zoology, S.M.M. Town, Post-Graduate College, Ballia-277 001.
Caudal fin deformity in a freshwater spiny eel Macrognathus aculeatus(Bloch).
Matsya, No. 9&10: 189-191.

In the present communication the deformity in the caudal fin of Macrognathus aculeatus has been reported which might be due to accidental injury of the vertebrae.

... 6 ref.

125. [1]Sukumaran, K.K.;[2]K. Gopal Rao and [3]B.R. Dutta (1983-84)

1. Additional Director, Dept. of Fisheries, Freshwater Biological Station, Malampuzha, Via Palghat, Kerala.

2. All India Co-ordinated Research Project on Composite Fish Culture and Fish Seed Production, Central Inland Fisheries Research Institute, Bhubaneswar-751 002.

3. Krishi Vigyan Kendra and Trainer's Training Centre of CIFRI, Kausalyagang, Via: Bhubaneswar-571 002, (Orissa).

Experiments on the induced spawning of Chinese cyprinoids Hypophthalmichthys molitrix (Val.) and Ctenopharyngodon idella (Val) at the newly constructed Dhauli fish farm (Orissa).
Matsya No. 9&10: 165-172.

Observations on the maturity and induced spawning of silver carp, H. molitrix and grass carp, C. idella carried out under the ecological conditions prevailing in the newly constructed Dhauli fish farm (Orissa) during the years 1977 and 1978 are reported.

126. Sukumaran, N. & Md. Kabeemur Rahman (1985)

Fisheries College, Tamil Nadu Agricultural University, Tuticorin-628 008.
Off-seasonal breeding of mrigal.
Fishing Chimes, 5(7): p 11.

The females of catla and mrigal breeders were given preparatory doses of pituitary extract (2 mg/kg body weight) and gonadal development was noticed in mrigal but not in catla. Mrigal was bred twice a year at the interval of one month.

127. Sultana, Rafia and K. Srinivasa Rao (1983-84).

Dept. of Zoology, Andhra University, Waltair-530 003.
On the occurrence of a bi-nucleate oocyte in a teleost fish Mystus gulio (ham.)
Matsya, No. 9&10: 202-205.

During the course of studies on oogenesis in Mystus gulio an uncommon occurrence of a binucleate oocyte in stage I of maturity has been reported.

... 4 ref.

128. Surendran, P.A.: K. Mahadeva Iyer & K. Gopakumar (1985)

CIFT, Cochin-682 029.
Succession of bacterial genera during iced storage of three species of tropical prawns, Penaeus indicus, Metapenaeus dobsoni and M. affinis.
Fish. Technol., 22(2): 117-120.

The native bacterial flora of ocean fresh tropical prawns, Penaeus indicus, Metapenaeus dobsoni and M. affinis were more or less similar, mainly consisting of Pseudomonas, Acinetobacter, Moraxella and Arthrobacter. Spoilage by Pseudomonas was very insignificant in prawns under iced storage.

... 14 ref.

129. Tandon, K.K. & Nirmal Chaudhury (1983-84).

Dept. of Zoology, Panjab University, Chandigarh-160 014.
Variations in the scales of some freshwater, teleostean fishes of India.
Matsya, No. 9&10: 38-45.

Authors described the nature of scales and the diversity in their form of 39 freshwater fishes.

... 26ref.

130. Thangaraja, M. & V. Ramaiyan (1983-84)

Centre of Advanced Study in Marine Biology, Annamali University, Parangipettai-608 502, Tamil Nadu, India.
Notes on gillraker serrae and food of Thryssa sp.& Thrissina sp. of Proto Novo (Bay of Bengal).
Matsya, No. 9&10: 70-77.

The paper deals with the gillraker serrae of six species of Thryssa and one species of Thrissina which serve as important characters for the identification of morphologically similar species. Synoptic information on the food of the species is also discussed.

... 9 ref.

131. Tung, H.F. & T.C. Shen (1985)

Dept. of Botany, Univ. of Malaya, Kuala Lumpur, Malaysia.
Studies of the Azolla pinnata Anabaena arollae symbiasis: concurrent growth of Azolla with rice.
Aquatic Botany: 22(2): 145-152.

The growth of Azolla pinnata under a rice crop was monitored throughout the growing season. The study showed that Azolla growing concurrently with rice, increased grain yield significantly.

... 12 ref.

132. Unnithan, G.R.; H. Krishna Iyer & P. Srinivasa Rao (1985)

CIF Technology, Cochin-682 029.
Economic analysis of 22 m and 23 m deep sea trawlers.
Fish. Technol., 22(2): 79-82.

The cost-benefit analysis of 23 m and 22 m trawlers separated from Visakhapatnam base is presented. The profit over capital investment for 23 m trawler worked out to be about 18% and about 10% for a 22 m trawler.

...1 ref.

133. Van Wijk, R.J. & H.J.A.J. Trompenaars (1985)

Laboratory of Aquatic Ecology Catholic University, Toernooiveld, 6525 Ed Nijmegen (The Netherlands).
On the germination of turions and the life cycle of Potamogeton trichoides Cham Et. Schold.
Aquatic Botany, 22(2): 165-172.

The life cycle of Potamogeton trichoides has been studied in a pondnear Nijmegen (The Netherlands); the germination of its turions has been studied in relation to temperature, cold induction and light dependency.

... 10 ref.

134. Veeraragavan, K.; S. Kashinathan ' S. Ramakrishnan (1985)

Dept. of Biochemistry and Biology Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry-605 006, India.
Biosynthesis of cholesterol in fat body of the male frog Rana hexadactyla lesson
Indian J. Exp. Biol., 23(7): 410-411.

Fat body attached to the testes of Rana hexadactyla formed an indispensable link in the hypothalamo-hypophyscal gonadal axis in the male reproduction. The fat body seemed to contribute cholesterol for steroidogenesis in the testes.

... 9 ref.

135. Venkataramaji, V.K., *K. Sri Raman & R.R. Natarajan (1983-84)

Centre of Advanced Study in Marine Biology, Annamalai University, Parangipettai-608502.

*Research Asstt., Tamil Nadu State Fisheries, Parangipettai-608502.

Carangid fishery of pPortoNovo coast. Matsya, No. 9&10: 157-164.

Seasonal catch and size composition, nature of fishery, different types/crafts and gears /of employed for carangid fishery in PortoNovo and economic importance are discussed. About 29 species were recorded in the inshore waters of PortoNovo.

... 10 ref.

136. [1]Venkataramanujam, K. &[2]K. Ramamoorthi (1983-84)

1. Fisheries College, Tamil Nadu, Agricultural University, Korampallam-628 101. Tamil Nadu.

2. Centre of Advanced Study in Marine Biology, Annamali University, Proto Novo-608 502, Tamil Nadu.

Development of the eggs and larvae of Cynoglossus sp.
Matsya, No. 9&10: 78-81.

The development of Cynoglossus sp. is studied in the laboratory conditions. The eggs are perfectly spherical and transparent. The characteristic features of the different stages of development are described.

... 6 ref.

137. [1]Venkataramanujam, K. & [2]K. Ramamoorthi (1983-84)

1. Fisheries College, Tamil Nadu Agricultural University, Korampallam-628 101, Tamil Nadu.

2. Centre of Advanced study in Marine Biology, Proto Novo-608502, Tamil Nadu

Development of the eggs and larvae of Caranx sp.
Matsya, No. 9&10: 82-86

The development of Caranx sp. is studied in the laboratory conditions. Eggs are spherical, with a single oil globule and with many black pigments. The characteristic features of the different stages of development are described.

... 14 ref.

138. Venkatesan, V. (1985)

Marine Products Export Development Authority, Machilipatnam.

Tiger prawn culture in freshwater ponds is an on-going practice.
Fishing Chimes, 5(6): 73-74.

In Andhra Pradesh, the total brackish-water area under prawn culture during 1983 was 392.06 ha. As a big prawn farm in west Godavari and a few medium farms in other districts were lying idle, 141.69 ha area only was under prawn culture during the beginning of 1984.

139. Venkatasen, V.; S. Victor Chandra Bose & R. Srinivasan (1981)

A report on the infestation of peritrich ciliates Zoothamnium sp. and Epistylis sp. on pond culture tiger prawn, Penaeus monodon Fabricius.
J. Inland Fish. Soc. India, 13(2): 107-109.

The present report deals with the infestation on tiger prawn, Penacus monodon in Santhome Brackishwater Fish Farm at Madras. The gills of the prawns were infested mainly by Zoothamnium sp. and the appendages and other parts by Epistylis sp.

140. Vijayakumar, B. (1985)

Dept. of Aquatic Biology & Fisheries, University of Kerala, Trivandrum-695 007, India.
Condition factor of Puntius filamentosus (Val.)
Geobios, 12(6): 234-237.

During the breeding season high value of the condition factor (K) is an evidence of active breeding with low feeding intensity in Puntius filamentosus. As the feeding intensity decreases K also decreases in females.

... 5 ref.

141. Vinci, G.K. & V.V. Sugunan (1981)

CICFRI, Barrackpore, West Bengal.
Biology of Labeo calbasu (Hamilton) of Nagarjuna sagar Reservoir, A.P., India.
J. Inland Fish. Soc. India, 13(2): 22-39.

Food and feeding habits, lengthweight relationship and breeding season of Labeo calbasu are described. Relationship of fecundity with total length, weight and gonad weight are also discussed.

... 23 ref.

142. Wagh, S.B.: Khalid Shareef and Shakila Shaikh (1985)

Dept. of Zoology, Marathwada Univ, Aurangabad-431 004 (India).
Acute toxicity of cadmium sulphate, zinc sulphate and copper sulphate to Barbus ticto (Ham.): Effect on oxygen consumption and gill histology.
J. Environ. Biol., 6(4): 287-293.

The fishes were exposed to different concentrations of the heavy metals and it was observed that the toxicity of heavy metals to fish, Barbus ticto is in an increasing order from $CdSo_4$ $ZnSo_4$ $CuSo_4$.

... 14 ref.

143. [1]Wetzel, Robert G.;[2]Erik S. Brammer; [2]Kare Lindstrom & [2]Curt Forsberg (1985)

1. W.K. Kellogg Biological Station, Michigan State University, Hickory Corners, MI 49060, U.S.A.

2. Institute of KLimnology, University of Uppsala, Box 557, S-75122 Uppsala, Sweden.

Photosynthesis of submersed macrophytes in acidified lakes.
II. Carbon limitation and utilization of benthic Co_2 sources.
Aquatic Botany, 22(3): 107-120.

Photosynthetic characteristics of Co_2 limitations were analyzed for leaf tissue in a Cartesian-river system, in which irradiance could be stringently controlled, and with whole plants in electrode macrosystems for submersed macrophytes and other benthic moss and algae from acidified lakes.

... 32 ref.

144. Yazdani, G.M. (1985)

Zoological Survey of India, Gangetic Plains Regional Station, Patna.
Fishes of Khasihills.
Rec. Zool. Surv. India, (70): 1-40.

An attempt has been made in the book to give an uptodate classification, nomenclature and distributional records besides synoptic keys, important synonyms and outline drawings of 29 species of 16 genera from Khasi Hills of the state of Meghalaya.

... 36 ref.

AUTHOR INDEX

Every author's name appearing in the original article is listed alphabetically, including corporate bodies (Societies, organisations etc.), whether accurring as a single or multiple words. (Reference is given to the serial no. of the entry).

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